

REMARKS

Claims 1-30 are pending in the present application and were examined. Claims 1-6, 9-16 and 19-30 stand rejected and Claims 7, 8, 17 and 18 are objected to. In response, Claims 1, 11, 21 and 26 are amended, no claims are cancelled and no claims are added. Applicants respectfully request reconsideration of pending Claims 1-30 in view of at least the following remarks. Reconsideration and withdrawal of the rejections of record are requested in view of such amendments and the following discussion.

I. Claims Rejected Under 35 U.S.C. §102

The Examiner has rejected Claims 1-6, 9-16, 19-20 and 26-30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,222,388 issued to Bridgewater, Jr. ("Bridgewater"). Applicant respectfully traverses this rejection.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" Lindemann Maschinenfabrik v. American Hoist & Derrick ("Lindemann"), 730 F.2d 452, 1458 (Fed. Cir. 1994)(emphasis added). Additionally, each and every element of the claim must be exactly disclosed in the anticipatory reference. Titanium Metals Corp. of American v. Banner ("Banner Titanium"), 778 F.2d 775, 777 (Fed. Cir. 1985).

Regarding Claim 1, Claim 1 is amended to recite the following claim feature, which is neither disclosed nor suggested by Bridgewater:

a pull-down circuit including at least one pull-down device of the first device type having a source coupled to ground, the pull-up circuit and the pull-down circuit to charge an output node and a complement output node in opposite directions to generate a differential predriver signal pair. (Emphasis added.)

According to the Examiner, the above-recited features of Claim 1, prior to amendment, are disclosed in FIG. 10 of Bridgewater, which illustrates a pull-down circuit including devices 534 and 536. (See, pg. 2 of Office Action mailed May 26, 2005.) As disclosed in Bridgewater:

Driver 512 includes cross-coupled NMOS transistors 530, 532, 534, and 536. Driver 512 provides signals 506 and 508 as shown. Driver 512 receives a current through point 538 from current source 514. Likewise, current source 516 supplies a current through point 540 to the differential driver. (col. 11, lines 35-40.)

As indicated by the cited passages above, transistors 534 and 536 are NMOS transistors. Accordingly, a source of NMOS transistors 534 and 536 is coupled to point 540. As indicated by the cited passage above, current source 516 supplies a current through point 540 to the differential driver. (See, supra.) In contrast to the pull-down circuit disclosed in Bridgewater, Claim 1, as amended, recites a pull-down circuit including at least one pull-down device of the first device type having a source coupled to ground.

Applicants respectfully submit that since the source of transistors 534 and 536 of the pull-down circuit taught by Bridgewater (*see*, FIG. 10) is coupled to point 540 to receive a current source from current source 516, the Examiner is prohibited from relying on Bridgewater as an anticipatory reference to exactly disclose a pull-down circuit including at least one pull-up device of the first device type having a source coupled to ground, as recited by amended Claim 1. Hence, the Examiner fails to establish a *prima facie* case of anticipation, since the Examiner fails to provide the presence in a single prior art reference disclosure of each and every element of the claimed invention recited by amended Claim 1, as arranged in the claim. Lindemann, supra.

Accordingly, Claim 1, as amended, is patentable over Bridgewater, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claim 1.

Regarding Claims 2-6, 9 and 10, Claims 2-6, 9 and 10, based on their dependency from Claim 1, are also patentable over Bridgewater, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claims 2-6, 9 and 10.

Regarding Claim 11, Claim 11 recites the following claim feature, which is neither disclosed nor suggested by Bridgewater:

a pull-down circuit including at least one pull-down device of the first device type having a source coupled to ground, the pull-up circuit and the pull-down circuit to charge an output node and a complement output node in opposite directions to generate a differential predriver signal pair. (Emphasis added.)

As indicated by the above-recited feature of amended Claim 11, the above-recited feature is analogous to the above-recited feature of amended Claim 1, which recites at least one pull-down device of the first device type having a source coupled to ground. Accordingly, the arguments previously provided above, with reference to the rejection of amended Claim 1 under 35 U.S.C. §102(b) applies to the Examiner's rejection of Claim 11 under 35 U.S.C. §102(b).

For at least the reasons indicated above, the connection of the source of transistors 534 and 536 to point 540 in order to receive current from current source 516 (*see*, col. 11, lines 37-40) prohibits the Examiner from establishing the presence in the single prior art reference disclosure of Bridgewater of each and every element of the claimed invention recited by amended Claim 11, as arranged in the claim, as required to establish a *prima facie* case of anticipation. Lindemann, supra. Hence, Applicants respectfully submit that the Examiner is prohibited from establishing a *prima facie* case of anticipation with Bridgewater as an anticipatory reference, since Bridgewater fails to exactly disclose each and every element recited by amended Claim 11, and specifically, the recited feature of a pull-down device having a source coupled to ground. Banner Titanium, supra.

Accordingly, Claim 11, as amended, is patentable over Bridgewater, as well as the references of record. Consequently, Applicants respectfully requests that the Examiner withdraw the §102(b) rejection of Claim 11.

Regarding Claims 12-16, 19 and 20, Claims 12-16, 19 and 20, based on their dependency from Claim 11, are also patentable over Bridgewater, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claims 12-16, 19 and 20.

Regarding Claim 26, Claim 26, as amended, recites the following claim feature, which is neither disclosed nor suggested by Bridgewater or the references of record:

a pull-down circuit including at least one pull-down device of the first device type having a source coupled to ground, the pull-up circuit and the pull-down circuit to charge an output node and a complement output node in opposite directions to generate a differential predriver signal pair. (Emphasis added.)

The above-recited feature of amended Claim 26 is analogous to the above-described features of amended Claims 1 and 11. Accordingly, the arguments provided above with reference to the rejection of Claims 1 and 11 apply to the Examiner's rejection of Claim 26 under 35 U.S.C. §102(b). Applicants respectfully submit that the Examiner is also prohibited from establishing a *prima facie* case of anticipation of amended Claim 26 with Bridgewater as an anticipatory reference, since Bridgewater fails to exactly disclose each and every element recited by amended Claim 26. Id.

Accordingly, amended Claim 26 is patentable over Bridgewater, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claim 26.

Regarding Claims 27-30, Claims 27-30, based on their dependency from Claim 26, are also patentable over Bridgewater, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claims 27-30.

The Examiner has rejected Claims 21-25 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,617,891 issued to Srikanth et al. ("Srikanth"). Applicants respectfully traverse this rejection.

To establish a *prima facie* case of obviousness, the following criteria must be met: (1) there must be some suggestion or motivation to modify the reference or combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all the claim limitations. (MPEP §2142)

Regarding Claim 21, Claim 21 is amended to recite the following claim feature, which is neither disclosed nor suggested by Srikanth:

the I/O section having an output driver in which a pre-driver includes a pull-up circuit having at least one pull-up device of a first device type, and a pull-down circuit having at least one pull-down device of the first device type, the pull-up circuit and the pull-down circuit to charge an output node and a complement output node in opposite directions to generate a differential predriver signal pair to open/close a pair of line driver switches to generate a differential output driver signal pair, wherein the pull-up device is cross-coupled to the pull-down device. (Emphasis added.)

Conversely, as shown in FIG. 3 of Srikanth, buffer output circuit 220 includes predriver pull-up section 365 and predriver pull-down section 310. As disclosed by Srikanth:

The pre-driver 222 includes a pre-driver pull-up section 320 and a pre-driver pull-down section 330. The pre-driver pull-up section 320 includes n-transistors 322 and 324 and p-transistor 326 and 328, (col. 3, lines 15-18.)

As further disclosed by Srikanth:

Similarly, the pre-driver pull-down section 330 includes n-transistors 332 and 334 and p-transistor 336 and 338. (col. 3, lines 24-26.)

Accordingly, based on the cited passages above, the pre-driver pull-down section and pre-driver pull-up section include both NMOS transistors 326 and 328, 336 and 338, as well as NPMOS transistors 322, 324, 332 and 334. However, as clearly illustrated by FIG. 3 of Srikanth, transistors 322-328 of the pre-driver pull-up section and transistors 332-338 of the pull-down section 310 are not cross-coupled, as recited by amended Claim 21.

Consequently, Applicant respectfully submits that the Examiner is prohibited from establishing a *prima facie* case of anticipation with Srikanth as an anticipatory reference, since Srikanth fails to exactly disclose or suggest a pull-up circuit having at least one pull-up device of a first device set and a pull-down circuit having at least one pull-down device of the first device type, wherein the pull-up device and the pull-down device are cross-coupled, as recited by amended Claim 21. Id.

Therefore, Applicant respectfully submits that the Examiner fails to establish a *prima facie* case of anticipation since the Examiner fails to illustrate the presence in a single prior art reference disclosure of each and every element recited by amended Claim 21, as arranged in amended Claim 21. Lindemann, supra.

Accordingly, Claim 21, as amended, is patentable over Srikanth, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §102(e) rejection of Claim 21, as amended.

Regarding Claims 22-25, Claims 22-25, based on their dependency from Claim 21, are also patentable over Srikanth, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §102(e) rejection of Claims 22-25.

II. Allowable Subject Matter

The Examiner has indicated that Claims 7-8 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Applicants respectfully thank the Examiner for recognizing the allowability of Claims 7-8 and 17-18. However, such claims are also allowable based on their dependency from Claims 1 and 11, respectively, for at least the reasons described above.

CONCLUSION

In view of the foregoing, it is submitted that Claims 1-30, as amended, patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

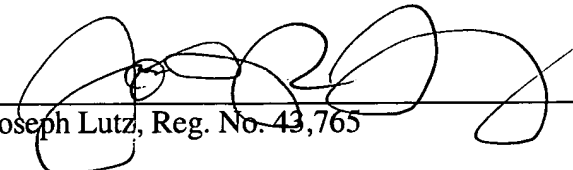
If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

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12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
(310) 207-3800

By: 
Joseph Lutz, Reg. No. 43,765

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July 28, 2005


Marilyn Bass

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